TEXAS Window Initiative

TEXAS WINS WITH BETTER WINDOWS

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March 27, 2003

Richard H. Karney
ENERGY STAR Program
US Department of Energy
Forrestal, EE-40
1000 Independence Avenue, S.W.
Washington, DC 20585
Fax: 202-586-4617

Re: ENERGY STAR Windows Criteria Change 2003

Dear Mr. Karney:

We sent you a letter last year in full support of the three-zone program criteria and climate map, and, after review of your latest letter and associated analyses, we continue to support the three-zone proposal and the benefits it would provide to Texas and the rest of the country. I am writing on behalf of the Texas Window Initiative (TWI), a utility-funded program in the state of Texas established to promote energy efficient windows. Our program has actively pursued market transformation in the state from inefficient single and double pane clear windows to ENERGY STAR windows in order to achieve state legislative policy goals of reduced electricity peak demand. We have followed the Department of Energy's process to revise the ENERGY STAR Windows program with great interest.

The more than a year-long delay in adopting a new standard has been troubling because opportunities to lower peak demand and reduce electric air conditioning use through market transformation have been put on hold as we await final action from the Department before we are able to upgrade and improve our message. Unfortunately, the existing Energy Star standard is less stringent than the energy code adopted by Texas, making it difficult to continue to pursue market transformation based on ENERGY STAR in Texas. We hope that the Department will act expeditiously to approve a new standard.

Our support for the three-zone criteria and climate zones stems from four considerations, which we stated in our previous letter and reiterate here:

- The new program criteria, unlike the old criteria, establish reasonable insulating value (U-factor) requirements for parts of Texas with heating requirements (a 0.40 U-factor in the central region);
- The new program extends full solar heat gain reduction (a maximum 0.40 SHGC) throughout the state of Texas and to the entire central U.S., properly recognizing the electric peak demand and environmental air emissions benefits of solar control windows on residential air conditioning requirements;
- The new program, unlike the old program, equals or exceeds the new energy efficiency building code which became effective late last year in Texas; and
- The new program continues to permit the use of aluminum windows in south Texas.

Adoption of the three-zone proposal would be perfectly in line with the message that the TWI has been advocating for the past few years. Initially, we ran into difficulty in promoting ENERGY STAR windows throughout the state because the 0.40 SHGC program requirement did not include the entire state of Texas, and the 0.75 U-factor in the current program's southern zone was higher than the IECC would allow in those same areas. To

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deal with this issue, our approach has been to recommend use of an ENERGY STAR window that meets both the southern and central climate regions (e.g., a 0.40 U-factor and 0.40 SHGC). While this message caused some confusion, it was better than recommending the wrong window. With the new three-zone criteria, our message will be much simpler to implement because it limits the higher U-factors to only the far south regions of Texas where they are most appropriate and in line with the IECC (our energy efficiency building code throughout the state), and the 0.40 SHGC requirement under the three-zone proposal would cover the entire state. Our message will be simpler because we can promote low solar gain low-e glazing throughout the state, and provide better guidance to prospective purchasers of aluminum-framed windows to indicate where such frames would be acceptable so long as the most important attribute, low solar gain low-e glass was used.

Beyond just my work with the TWI, I personally believe the three-zone approach is the best way to upgrade the program. I have been affiliated with the electric utility industry for my entire career (I was a Director of the Electric Division at the Public Utility Commission for Texas for many years), and I understand that energy efficiency extends far beyond simply the Btus consumed. Contribution to electric system peak demand, air conditioning sizing, consumer cost and environmental impacts are equally important, if not more important considerations. For each of these considerations, in residential buildings throughout most of the country, it is the impact of solar heat gain on cooling requirements that is the crucial driving factor. Each of these considerations is best served by extending solar control windows as far north as reasonably possible.

For example, electric utilities in the northern parts of the United States are generally summer-peaking like their southern counterparts due to the air conditioning loads. Moreover, control of electric peak demand has become particularly important to electric system security and reliability over the past few years. While there may be adequate peak supply in many regions of the country (like Texas), this peak supply often comes from old, inefficient, expensive, environmentally-detrimental units that should be retired. Moreover, such adequate supply is only projected for a short period – soon additional plants will be needed absent adequate control of peak demand. In the past twelve months, Texas has already experienced peak prices at levels more than ten times the average price of electricity – in fact, the PUC of Texas maintains caps on the competitive Texas wholesale market (which have been reached a number of times) of $1.00/kwh as compared with average prices much less than 10 cents per kwh – because of concerns with electrical peak demands and resulting prices. The new ENERGY STAR criteria address solar control well, by extending the SHGC requirement to the entire central region of the U.S.

Aside from the energy savings and environmental benefits to these affected areas, extending the 0.40 SHGC requirement farther north is also of great interest to the TWI because Texans stand to benefit through economies of scale, product standardization, and competition. The 0.40 SHGC requirement in the central region will trigger increased production of low solar gain low-e windows throughout the country. There is likely to be greater competition to provide these products. This increased competition, standardization and economies of scale will translate to lower product costs to all consumers, including those in Texas.

In conclusion, we encourage the Department to reaffirm, in an expedited fashion, the three-zone ENERGY STAR Windows program proposal and climate zones. Thank you for considering our views.

Sincerely,

Jay Zarnikau, Ph.D
Program Director